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An Essay
on
Pneumonia
Respectfully submitted to the
Medical Faculty
of
South Carolina
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Submitted by Robert M. Patterson in 1856

Pathology and treatment of Pneumonia

In entering upon the subject of inflammation, we enter a field of research and inquiry that is almost unbounded, for the majority of diseases that the medical man has to contend with in the practice of his profession, are inflammations of some part of the body, for the causes which produce it are present at all seasons of the year. It is for this reason that we have chosen pneumonia as the subject of this thesis; not because we can offer anything original, but that a thorough knowledge of this disease is so essential both to the well being of the physician and his patient, for if the doctor understands this disease, he can, in the majority of cases cut short the disease in its commencement.

Pathology and Treatment of Pneumonia

When in the language of an able and eloquent writer (Dr. Latham) we consider what the disease is, and what the part affected, the disease pneumonia, and the part the lungs, we can not value knowledge too high, for it is inflammation of one of the great tripod of life, upon the proper performance of whose functions, that which we hold most dear, life and health, rests. Pneumonia arises, in the majority of cases, from the application of cold, moisture is generally present and aids its effect; it may occur at any time in the year, we find it in the heats of summer, during the snows of winter, while the balmy and refreshing breezes of spring, make the whole world look glad; the fields are green, the

trees bud forth, the air is scented
 and redolent with the perfume of flowers,
 and the beautiful feathered songsters
 are sending up their delightful music
 to the heavens, and strange to say,
 it is most prevalent during winter
 and spring, But to return to the
 causes of pneumonia; intense, and
 terrible cases of it are sometimes
 produced by the inhalation of steam
 and if we go to the department of
 the surgeon, we will find many
 cases, caused by fractured ribs
 irritating the surface of the lungs.
 Cold and moisture though generally
 are the causes of this disease; it is
 something strange that cold produces
 such different ~~inconsistent~~ effects in
 different individuals, for the same

4

exposure may cause peritonitis in
one, pleurisy, in another, and pneumo-
nia in a third, the reason for this
is unknown, and the cause, "sub judice."
Cold acts in the production of disease,
by constricting the capillary vessels,
and driving the blood in too great
quantity upon the organs, thereby
producing congestion, and subsequently
inflammation, and the part that
is weakest will be most liable to
suffer from its effects.

The symptoms
of pneumonia are as follows,
the disease will usher itself in by
shivering and a chill, and this
is followed by a hot stage, and this
hot stage is accompanied by oppression
of the chest and dyspnea, this is

soon increased to pain, it is a dull pain, not acute and lancinating, as in pleurisy, the patient can not draw in a long breath with ease, there is increasing dyspnea, the pulse is in all cases, full, hard, and frequent also headache, nausea and vomiting in some cases. Pain in the back and lumbar region, there is cough from the first, at first dry, but soon brings up mucus, the sputa are at first white, or yellowish, but soon becomes rust colored and very viscid the vessel containing them may be inverted, without displacing them.

We come now to the signs that denote inflammation of the lungs, which we ascertain by means of the ear and fingers, by auscultation and

6
percussion; these signs are very
easily distinguished in most cases.
We can trace inflammation of the
lungs almost infallibly by the sounds
that we hear in the chest.

If the ear
be applied to the surface of the thorax
during the first stage of this disease
we hear a peculiar sound, very char-
acteristic, it is compared to the crackling
sound made by salt, when thrown
upon hot coals, also to the noise
made by rubbing a lock of the hair
between ones fingers, close to the ear,
it is called by writers, the crepitant
ruchus, or minute crepitation, this
is caused by the passage of air through
liquid, and the bursting of minute
air bubbles, it is at first mingled

7

with the natural respiratory murmur
and if the inflammation continues
gradually predominates over the
natural sound, and tells us that
the disease is increasing in intensity,
percussion gives a duller sound than
in the healthy state.

The anatomical
characters presented by post mortem
examinations, are as follows, the substance
of the lung is gorged with bloody serum,
it is heavier than natural, and yields
to pressure, it resembles the spleen in
its consistence, and hence is termed
splenization, this is the stage of
engorgement, and if the proper remedies
are applied now, we may perhaps
cut short the disease and save our
patient, but if through ignorance or

non attention we do not rise the
remedies, the disease goes on to another
stage, all the symptoms are increased
the dyspnea becomes greater, the pain
is more intense, the cough is more
troublesome, the sputa are of a rust
color, and tawny yellow; the lungs
give a dull flat sound on percussion,
the patient's countenance looks anxious
and distressed, he devotes most of his
attention to trying to breathe freely, he
does not pay much attention to persons
and things around him.

The decubitus
is dorsal, the patient lies upon his
back, for he finds that posture most
comfortable. If the ear is applied to
the chest, at this period, we will hear
a whiffing, puffing sound like little

currents of air puffed in and out of a
tube, a blowing sound, the cause of which
is, that the air does not enter the
minute air vesicles of the lungs, but
only through the larger bronchial tubes.

Another curious phenomenon now presents
itself, the patient's voice can be heard
across the inflamed lung, and it is
very much altered, it sounds like
the voice of one speaking through a
tube, this is called bronchial voice,
or bronchophony.

The air cells of the
lung, in this stage are blocked up
by the effusion of lymph, and the
lung becomes heavier, it sinks readily
in water, it is friable, and easily
crushed between the fingers, resembling
liver in its consistence, hence it is said

said to be hepatized, the stage of
hepatization: The disease is now at its
height, and if a change for the better
is produced, the symptoms assume
a milder form, the dyspnea is
lessened, the patient breathes easier,
the cough becomes less urgent, the pain
is diminished, the pulse becomes
less hard and frequent, the bronchial
respiration is lost in the crepitation,
and if he does not expose himself too
soon, he will get well without any
difficulty, but take the worst of the two
suppositions, and a third stage is
established, it is generally conceded by
writers that we can not tell when
this occurs, unless an abscess is formed
in the lung, and a large gurgling
crepitation is heard, and portions of

the lung are spat up, many writers say that abscess is very rare. Lemane says that in several hundred post mortem examinations, he found only five or six, but Prof Dickson, with whose fame, as a physician, gentleman and scholar, every one is acquainted, says, that in his practice he has met with them in a greater proportion than that. When this stage is established, there is little hope for our patient, the breathing gets shorter the pulse gets weaker, like a thread, the patient looks anxiously for relief and he dies from asthenia.

There are other symptoms, that we have not mentioned, that frequently occur during the course of this disease; we hear

hear puerile respiration in the sound
 lung, this denotes that the healthy
 lung is performing a double duty, it
 does the work of both lungs, for there
 is a physiological law, by which one
 organ can accomodate itself to incre-
 ased action, this is the case with
 the kidneys, let one be diseased, and
 the other will increase its action to
 such an extent as to fully compensate
 for the inaction of the other.

~~our patient in the breathing of~~ Delirium
 is a symptom that sometimes occurs
 in Pneumonia, ~~and~~ when it appears
 we may fear for our patient, for it
 denotes that the blood is not duly
 arterialized, and that venous blood
 is circulating through the brain; the
 face is of a purplish color, he mutters

mutters or sings incoherently.
 The diagnosis is not difficult, we
 distinguish it from bronchitis by the
 minute crepitation, by the dullness
 upon percussion, and the rust colored
 sputa. The duration of Pneumonia is
 generally from ten to twenty days
 but it may last a good deal longer
 than this; the patient generally dies
 in the beginning of the third stage.

The prognosis
 is better in the first stage than in
 the second, and better in the second
 than in the third, for it is believed
 by most writers that when the lung
 is in the stage of purulent infiltration
 the patient cannot recover.

The prognosis
 is favorable in an uncomplicated case

but where the disease is complicated with other affections as of the brain and liver, we fear for our patients life, and if he have been previously healthy the chances are in his favor.

We come now to speak of the treatment of inflammation of the lungs; the very first thing we have to do, if called in soon enough, in a pure case of Pneumonia, is to bleed from the arm, from a large orifice, and in a full stream, in the erect posture, and bleed until some sensible effect is produced on the pulse, if it was contracted until it becomes fuller, bleed until the pain and dyspnea are relieved, or we see the signs of syncope, if these effects are not produced, we do not get the benefit of the remedy, this

takes the place of rest, in a degree, for we cannot put the inflamed lung at rest, like an inflamed eye, the patient is obliged to use his lung, but we can diminish the circulation of blood, and of course relieve the dyspnea, but one bleeding will not suffice, if the relief is not permanent, we must bleed again and again, Dr Watson recommends leeches and cups to be applied to the chest, as adjuvants to the lancet, this remedy is applicable especially to the first stage or that of engorgement, after depletion we must use ^{the} Emetic, it must not be given to produce vomiting, but to produce a relaxing and sedative effect, Prof Dickson recommends it to be given in doses of a $\frac{1}{4}$ to $\frac{1}{2}$ grain every hour, and says he has found it very beneficial; it is given in

very large doses by some practitioners, it is given by them to produce tolerance, it admits in these large doses, sometimes, at first, but only for a while and then the system tolerates the medicine; After the lungs become hepatized, we must rely mainly on some of the preparations of mercury: We may give calomel in combination with Specac. in the proportion of 2 grs calomel to $\frac{1}{4}$ or $\frac{1}{2}$ grain of Specac every two or three hours, and if necessary we may add laudanum, to prevent too active purgation. Serpentina and Seneca in combination with Specac and Sinct Opii are recommended with great confidence by Prof Dickson.

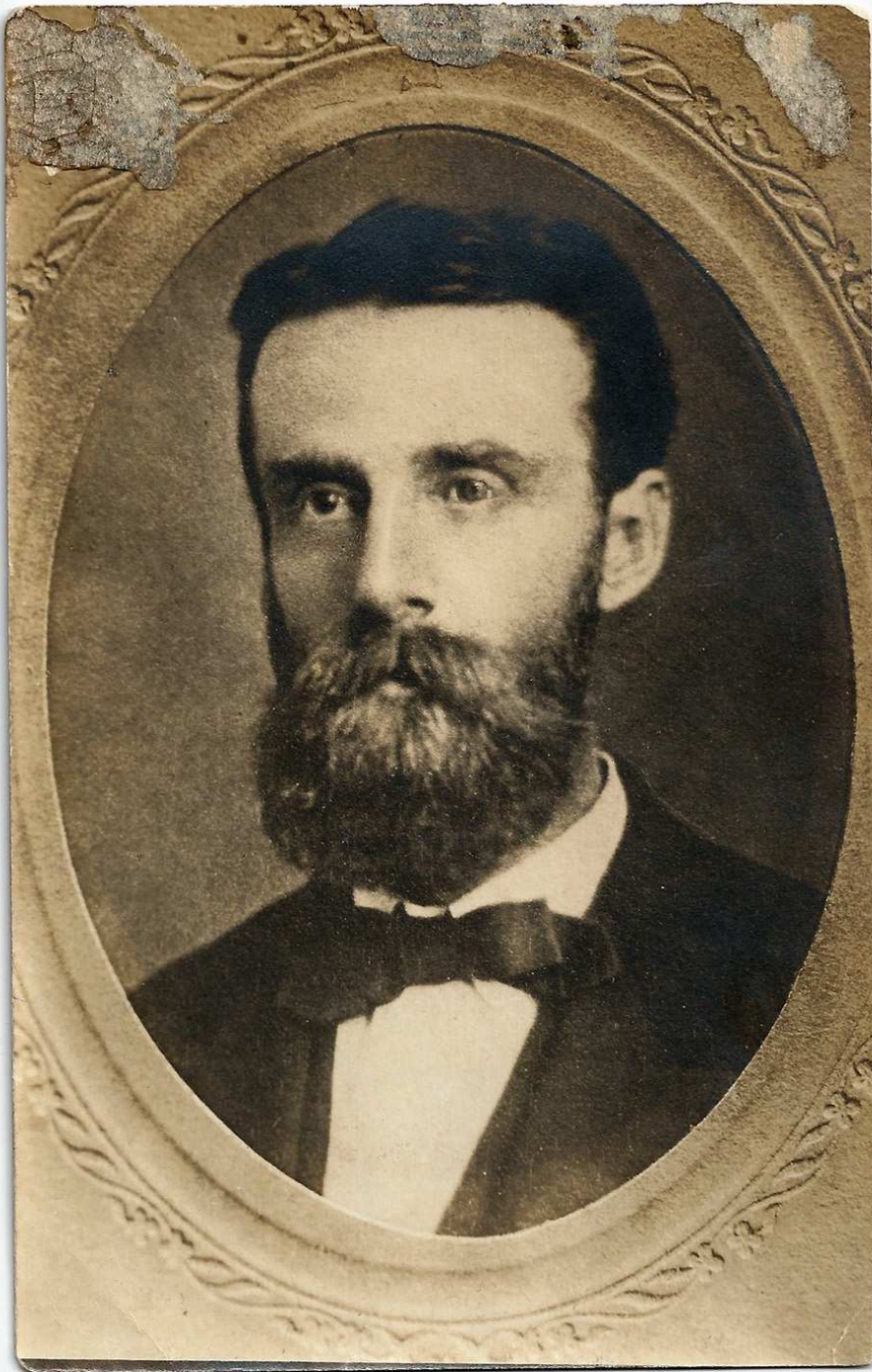
The Veratrum Viride is also used in pneumonia, it was introduced into practice by Dr. Norwood of Cohesbury

it acts by controlling the action of the heart ~~part~~, but it is said not to deserve the high encomiums passed upon it, we have never it used. The Eupatorium in combination with Senega in the proportion of $\frac{1}{2}$ of Eupatorium and $\frac{1}{2}$ Senega in a pint of boiling water, of which a tablespoonful to a wineglassful may be taken every two or three hours; is recommended.

Blisters may be necessary in some cases, but they greatly discommode the patient, and interfere with our auscultation, the best time to use them is in the beginning of the third stage. Sinapism and fustulation with Tart Emetic are also used with advantage, also cups and leeches, when the patients pulse is very weak and thready, and a

a disposition to sink is evident, we must use stimulants, any of the alcoholic preparations, Whiskey, Brandy or wine, and also Carb. Ammonia, will serve our purpose. During the whole treatment we must keep the bowels in a soluble condition, but active purgation, must be avoided, for that does not consist with the mercurial remedies. Castor oil may be given "Pro oe nata", it is the very best Laxative.

And now gentlemen, having finished what we have to say of this disease, we would respectfully submit our Thesis to you, for your consideration, only hoping that you may pardon the errors, and rectify the mistakes.



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